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**Before the**
**FEDERAL COMMUNICATIONS COMMISSION**
**Washington, D.C. 20554**

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| In the Matter of | ) | |
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| Advanced Television Systems and | ) | MM Docket No. 87-268 |
| Their Impact Upon the Existing | ) | |
| Television Broadcast Service | ) | |

# COMMENTS OF THE ELECTRONIC INDUSTRIES ASSOCIATION AND THE EIA ADVANCED TELEVISION COMMITTEE

Peter F. McCloskey
President
Electronic Industries Association

F. Jack Pluckhahn
Chairman
Advanced Television Committee

2500 Wilson Boulevard
Arlington, Virginia 22201
(703) 907-7600

Of Counsel:

Joseph P. Markoski
Marc Berejka
Squire, Sanders & Dempsey
1201 Pennsylvania Avenue, N.W.
Post Office Box 407
Washington, D.C. 20044
(202) 626-6600

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## SUMMARY OF POSITION

EIA and the ATV Committee urge the Commission to affirm its tentative decision to adopt the Advanced Television Systems Committee's standard (the "Standard") for digital television broadcasting ("DTV") without qualification. In this proceeding, the Commission has established three goals: to preserve universal access to free, over-the-air broadcast television; to encourage the expeditious migration to DTV so as to free spectrum for other uses; and to rely on marketplace forces to the maximum extent feasible during this process. Adoption of the Standard is the only way to ensure that each of these three goals is simultaneously achieved.

The concerns expressed by the Commission's Notice of Proposed Rule Making regarding the impact of the Standard on future technological development are misplaced. As the Commission itself has recognized, the Standard is extremely flexible. Indeed, by creating a basic DTV syntax, the Standard will encourage technological creativity.

The Commission should also not commit itself now to reexamining or sunsetting the Standard at a date certain Promoting consumer confidence in DTV is paramount if the Commission is to achieve its stated goals in this proceeding. If the Commission were to condition or qualify its adoption of the ATSC DTV Standard, it would handicap the transition process even before it has begun. Likewise, the Commission should not artificially limit the scope of its approval of the Standard. A partial Standard would foster technological chaos by encouraging the introduction of a myriad of incompatible DTV devices and thereby undermine the Commission's efforts to promote a smooth transition to DTV.

Once the Commission adopts the Standard, it can rely on marketplace forces to turn DTV into a reality. In particular, the Commission can rely on the marketplace to resolve

many of the nettlesome interoperability issues associated with transmitting DTV signals over non-broadcast media. The Commission also can rely on the consumer electronics industry to provide consumers with a wide array of products will make DTV technology as appealing and affordable as possible. In this regard, the Commission should not limit consumer choice by adopting an all-format receiver requirement. Consumers should be allowed to migrate to DTV in the manner they choose, without being required to pay for features which they might not want or need.

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## COMMENTS OF THE ELECTRONIC INDUSTRIES ASSOCIATION AND THE EIA ADVANCED TELEVISION COMMITTEE

The Electronic Industries Association ("EIA") and the EIA Advanced Television Committee ("ATV Committee") hereby submit the following comments in response to the Fifth Further Notice of Proposed Rule Making ("*Notice*") which the Commission issued in the above-captioned proceeding on May 20, 1996.[1] In the *Notice*, the Commission has solicited comment on its tentative decision to incorporate into its rules the standard proposed for digital television broadcasting ("DTV") by the Advanced Television Systems Committee ("ATSC") and endorsed by the Commission's Advisory Committee on Advanced Television Service ("ACATS"). In proposing the adoption of the ATSC DTV Standard A/53 (or the "Standard"), the Commission praises it as "a remarkably capable and flexible system, one that exceeds the Commission's expectations when it began this proceeding . . . ."[2] The *Notice*, however, also asks what, if

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[1] *See Advanced Television Systems and Their Impact Upon the Existing Television Broadcast Service*, Fifth Further Notice of Proposed Rule Making, MM Docket No. 87-268, FCC 96-207 (released May 20, 1996) [hereinafter *"Notice"*].

[2] *Id.* at ¶ 37.

anything, should be done to ensure the Standard does not hamper future advances in broadcast technology.[3]

As set forth more fully below, EIA and the ATV Committee wholeheartedly endorse the ATSC DTV Standard and urge the Commission to incorporate the entirety of the Standard into the Commission's rules by reference. Once the Standard is adopted, it will spawn a host of new and innovative DTV products and services. In particular, adoption of the Standard will encourage broadcasters to begin investing in DTV equipment and programming, and enable equipment manufacturers to begin developing DTV receivers with a wide variety of capabilities and at an equally wide variety of price points. In this way, adoption of the Standard will provide consumers with the incentive and the ability to migrate to DTV. The ATSC DTV Standard will therefore serve the Commission's concurrent goals of preserving universally available, free, over-the-air television; promoting the expeditious nationwide transition to DTV; and relying on marketplace forces to the maximum extent feasible during the transition to DTV.

## I. INTRODUCTION

### A. Identification and Interest of EIA and the ATV Committee

EIA is the principal trade association of the U.S. electronics industry. The ATV Committee is a committee formed under the auspices of EIA. Although sponsored by EIA, the Committee is not limited to EIA members. Rather, it is composed of a diverse group of organizations, including developers, manufacturers, vendors and installers of equipment used in the broadcast, cable television, satellite, telecommunications and consumer electronics industries,

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[3] *See id.* at ¶¶ 44-48.

as well as providers of video delivery services. A list of the Committee's members is attached to these comments.

One of the ATV Committee's principal goals is to promote dialogue and to develop consensus on the many technical and policy questions presented by the introduction of DTV. The ATV Committee is committed to ensuring that the transition from today's NTSC environment to tomorrow's world of DTV is as seamless and inexpensive as possible for consumers. Towards this end, the ATV Committee has actively participated in each phase of this rulemaking proceeding.

The comments which follow reflect the consensus views of the ATV Committee's member companies. Individual members, however, may hold different views on a number of issues raised by the *Notice*, and EIA and the ATV Committee anticipate that these members may file their own comments.

**B. Policy Overview**

During the course of this nine-year proceeding, the Commission has correctly identified three central, but difficult-to-harmonize policy goals. First and foremost, the Commission has remained steadfast in its conviction that the transition to DTV should not jeopardize universal access to free, over-the-air television. Second, the Commission has recognized that the changeover to DTV should take place as expeditiously as possible so that the broadcasters' existing spectrum can be reallocated to new technologies or reused in connection with other existing technologies. Third, the Commission properly intends to rely on consumer choice and marketplace forces to the maximum extent feasible to determine the precise manner in which the United States makes the transition to DTV.

Reconciling these goals is a difficult task. Ninety-eight percent of American households own at least one NTSC television receiver; 88 percent own NTSC-compatible VCRs; and substantial numbers also own camcorders designed to work with their existing television equipment.[4] The Commission's challenge is to ensure a smooth migration, at a reasonable pace, from this vast installed base of NTSC equipment to DTV technology, and to do so without reducing the broad geographic and demographic reach of free, over-the-air television. EIA and the ATV Committee submit that incorporating the ATSC DTV Standard into the Commission's rules is a critical and necessary step in meeting this challenge.

## II. THE COMMISSION SHOULD INCORPORATE THE ENTIRETY OF THE ATSC DTV STANDARD INTO ITS RULES

In the *Notice*, the Commission proposes to adopt, and to require broadcasters to comply with, the ATSC DTV Standard. The Commission recognizes that, by doing so, it will "provide a measure of certainty and confidence to manufacturers, broadcasters and consumers, thus helping assure a smooth implementation of digital broadcast television and the preservation of a free and universally available broadcast television service."[5] The *Notice* further recognizes that, because the Standard is inherently flexible and capable of accommodating innovative new applications, it will provide the marketplace with certainty while simultaneously creating "headroom" for new developments.[6] In short, by adopting the Standard, the Commission will, with minimal regulation, send a clear signal to the public and to the marketplace that DTV has

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[4] EIA Market Research Department (1996 figures).

[5] *Notice* at ¶ 37.

[6] *See id.*

arrived, that DTV offers tremendous value both to consumers and to broadcasters, and that the transition to DTV can be accomplished at a reasonable price. The public and the marketplace, thus, will be assured that DTV indeed is the broadcasting technology of the future.

Despite the eminently sound reasoning underlying the Commission's decision to adopt the Standard, the *Notice* evidences some discomfort with this conclusion. The Commission's principal concern appears to be that the Standard may stand in the way of technological progress and competition as new and unforeseen uses of the spectrum evolve that may be incompatible with the Standard.[7] The Commission's concerns in this regard appear rooted in the much more philosophical debate over whether the benefits of government-mandated standards outweigh their costs.[8] Any such abstract concerns about the ATSC DTV Standard, however, are misplaced for two very important reasons. First, the Commission will not be able to achieve its goals of preserving universal access to free over-the-air television and speeding the transition to DTV in the absence of a mandated transmission standard. Second, the Standard has been designed by the private sector to be extraordinarily flexible and, as such, offers a far *greater* potential for innovation and competition than a *laissez faire* approach.

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[7] *See id.* at ¶ 34.

[8] *See id.* at ¶ 31.

### A. Only by Mandating the Entire ATSC DTV Standard Will the Commission Achieve Its Goals of Preserving Universal Access to Free, Over-the-Air Television While Expediting the Transition to DTV

Surprisingly, the *Notice* distinguishes only sparingly between the impending transition to DTV and the roll-out of other advanced technologies. The *Notice* acknowledges that DTV presents unique considerations, but also notes that the Commission has allowed the marketplace to determine transmission standards in the context of digital cellular service, personal communications service, direct broadcast satellite service, and digital audio radio service.[9] Specifically, the *Notice* points to the fact that television is an established, nationwide free service; that Americans rely on it as a primary source of information; and that an expeditious transition to DTV is a key component of the Commission's overall spectrum management plan.[10] The *Notice's* extremely *brief* treatment of these distinguishing characteristics, however, does not fully reflect the enormity of the matter at hand, and the vital role that a mandated DTV standard will play in achieving the Commission's stated public policy goals.

Few would dispute that free, over-the-air television is, and will continue to be, a critical component of our National Information Infrastructure. In addition to providing news and other information, it educates and entertains people of all backgrounds and interests. Television is also essential to the democratic process, and serves as an expansive public forum in which citizens can exercise their freedom of speech, press and religion. Preserving this

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[9] EIA and the ATV Committee agree with the Commission that the standards decisions made with respect to the above-cited technologies are not useful analogies. *See id.* at ¶ 36.

[10] *See id.*

unique national asset while replacing the underlying technology requires clear national direction, particularly if the Commission hopes to complete the process as expeditiously as possible and thereby make additional spectrum available for other uses.

In no uncertain terms, the transition to DTV will be unprecedented. At some point in the next century, the Commission will initiate the process of winding down and "turning off" analog broadcast service. The Commission is considering (in another phase of this proceeding) how long the transition period should be, but it has indicated that in all events the transition should take place as quickly as is reasonable and that it should not await the natural demise of all existing NTSC-compatible equipment. Never before has the Commission, or any other regulatory body for that matter, initiated a process which will *require* all households to purchase new equipment in order to continue to enjoy an existing service (or at least purchase converters to keep their current equipment operating).[11]

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[11] Although there is no true precedent for the transition to DTV, EIA and the ATV Committee submit that there may be one useful analogy. Beyond a doubt, the Commission's stipulation of standard telephone jacks and plugs has benefitted virtually every American. The Commission prescribed the standards for jacks and plugs during the course of two proceedings. First, the Commission generally found that the public interest would be best served if telephone subscribers were allowed to connect basic customer-premises equipment ("CPE") to the nationwide telephone network through nationally standardized plugs and jacks. *See Interstate and Foreign Message Toll Service*, 56 F.C.C.2d 593, 611 (1976). The Commission did not initially prescribe the standard plug/jack design. It assumed that "mutually acceptable designs would be arrived at by cooperative action of the affected industry," but in response to marketplace confusion and concerns, the Commission augmented the requirement to use standardized plugs/jacks by actually prescribing specific requirements as to acceptable plug/jack configurations. *Revision of Part 68 of the Commission's Rules to Specify Standard Plugs and Jacks for the Connection of Telephone Equipment to the Nationwide Telephone Network*, 62 F.C.C.2d 735, 736 & 739-48 (1976). The success of standard jacks and plugs has been so impressive that the Commission is now considering adopting standard jacks and plugs for wired delivery of video programming. *See Telecommunications Services Inside Wiring -- Customer Premises Equipment*, Notice of Proposed Rulemaking, CS Docket

A mandated DTV standard will promote the Commission's goals by providing consumers with clear, well-defined incentives to migrate to DTV. A nationwide technical standard maximizes user benefits -- in terms of service and cost -- by promoting economies of scale and by facilitating the rapid, nationwide distribution of products. Economies of scale reduce consumer prices. Broad geographic availability demonstrates to consumers that the products they purchase locally will retain value as they move from place to place. Equally important, a single standard promotes familiarity with a product, facilitates ease of use, and gives consumers confidence in the longevity of their purchases.

The unique circumstances surrounding the transition to DTV require the clear direction that only a mandated digital standard will provide. Thus, only by adopting the entire ATSC DTV Standard will the Commission successfully achieve two of its principal goals in this proceeding: ensuring that universal access to over-the-air broadcast television is preserved, and expediting the transition to DTV.

### B. The Commission Underestimates the Inherent Flexibility and Other Benefits of the ATSC DTV Standard

To the extent the Commission has any concern that the ATSC DTV Standard will discourage innovation or impede competition, it is plainly mistaken. As the *Notice* recognizes, the Standard is the culmination of years of effort on the part of diverse industries with diverse interests. Given its genesis, the resulting Standard not surprisingly establishes a rich variety of baseline options: there are 18 video scanning formats derived from the requirements of different video products; the video coding layer describes a minimum compression methodology; the

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No. 95-184, FCC 95-504, at ¶ 29 (released Jan. 26, 1996).

audio coding level accommodates techniques ranging from "surround sound" to multiple bit streams for multiple languages, or for services for the visually or hearing impaired; the transport layer allows broadcasters to allocate capacity dynamically among video, audio and ancillary functions within a single program, as well as among different programs; and the RF transmission layer describes a modulation technique designed to maximize coverage area and minimize interference to other operators.[12]

To suggest that these baseline parameters will constrain technical innovation is speculative in the extreme. None of these parameters precludes the development of improvements in, or compatible variations of, the Standard's various options. Rather, they invite further development and improvement. Indeed, in the limited amount of time that has transpired since the basic parameters of the Standard were adopted, it has already accommodated advances in DTV technology. Moreover, the ATSC will continue to act as a clearinghouse for further advances in the Standard, as well as in applications the Standard will support. In this sense, the Standard is simply a base on which future DTV innovations will build.

Ultimately, the adoption of a single standard for DTV will prove to be far more helpful than harmful to innovation and competition. All digital technology is, in theory, infinitely flexible. Without an agreed-upon DTV standard, future innovation would actually be stymied by disorder. The ATSC DTV Standard eliminates the threat of technological anarchy by providing a baseline for innovation. By creating a common DTV syntax, the Standard systematizes how the flexibility of digital technology can be utilized within the DTV environment. This flexibility, in turn, will fuel competition in the development of new and

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[12] *See Notice* at ¶¶ 8-17.

innovative video programming and other service offerings, as well as consumer electronics equipment. Broadcasters and equipment manufacturers will find that the ATSC DTV Standard presents virtually limitless opportunities for creativity and innovation.

## III. THE COMMISSION SHOULD NOT ARTIFICIALLY LIMIT THE LIFE OF THE ATSC DTV STANDARD

In an apparent effort to limit the perceived risks of adopting the ATSC DTV Standard, the *Notice* inquires whether the Commission should commit itself to reviewing the Standard at a certain point in time, or whether it should sunset the mandatory aspects of the Standard "at the conclusion of some meaningful period of time."[13] EIA and the ATV Committee submit that either alternative would undermine the otherwise clear message which adoption of the Standard would send to broadcasters, manufacturers and consumers. Rather than creating certainty, such measures would generate confusion and would delay, if not cripple, the transition to DTV even before it begins.

EIA and the ATV Committee can conceive of no sound public policy reason for committing the Commission to review or sunset the Standard at some future date. As noted above, the Standard is inherently flexible. Moreover, the ATSC has committed itself to continue to review the Standard and to implement compatible extensions of, and deviations from, the Standard that may evolve over time. Any concerns which the Commission may have about impeding innovation and competition are therefore unwarranted.

Furthermore, to *commit* the Commission to review the Standard would be to commit the Commission to do that which it is already obligated to do. The Communications Act

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[13] *Id.* at ¶¶ 45-46.

requires the Commission to exercise its regulatory authority in the public interest. This imposes a continuing obligation on the Commission to evaluate its rules and policies. It would thus be redundant to state that the Commission will review the Standard at a predetermined point in time. More recently, Congress has instructed the Commission to conduct biennial reviews of all of its regulations to ensure that they do not restrain competition.[14] The Commission's rulemaking authority provides a well-tested means for the public to seek, and the Commission to implement, necessary changes in the Commission's regulations. In addition, the waiver process remains available to the Commission and the public to accommodate changes in circumstances which require exceptions to the Commission's rules.

Similarly, the use of a sunset provision would be both unnecessary and completely arbitrary. Simply stated, there is no sound basis for the Commission to project *now* when or how the status of the Standard should be changed *in the future*. If the Standard is now the most appropriate means of facilitating the transition to DTV, there is no basis for prognosticating that it will no longer serve this same purpose several years hence. Although the *Notice* suggests that the NTSC standard may have deterred innovation, there is no basis for this conclusion.[15] Indeed, but for the *Notice*, few would dispute that the NTSC standard has served the Nation and generations of television viewers remarkably well. In any event, at its inception, there was no way to determine the useful life of the NTSC standard. Once a flexible standard such as the ATSC DTV Standard is put in place, there likewise will be no rational way of predetermining the end of its useful life.

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[14] *See* Communications Act of 1934, as amended, at § 402.

[15] *See Notice* at ¶ 34.

By contrast, the policy pitfalls of sunsetting the Standard or establishing a date certain for its review are clear. The success of the transition to DTV will depend, in significant part, on consumer confidence in DTV. It is the nature of the consumer electronics marketplace that early generations of new equipment are relatively expensive, and that prices decline only as consumer confidence and consumption increase. Marketplace uncertainty or other signals which undercut this confidence can have a devastating effect on the success of a new product. One need only review the history of eight-track cartridge tapes, laser discs and Betamax video cassette recorders to understand the significance of consumer confidence in the longevity of a product.

If the Commission were to announce that, while the ATSC DTV Standard is being adopted, it will be reviewed or, worse, "unendorsed" several years out, the Commission would be undercutting its efforts to make DTV a reality. Consumers plainly understand that technology evolves. History, however, demonstrates that consumers will shy away from technology which they believe to be transitory. Compact discs would not have succeeded if industry had simultaneously announced both the introduction and eventual abandonment of a standard format for compact discs and players. Such an announcement -- the equivalent of which has been suggested by the *Notice* -- would have been helpful only to the producers of vinyl records. Given the Commission's commitment to preserving universally available free, over-the-air television and its goal of an expeditious transition to DTV, the Commission should promote consumer confidence in this new technology rather than discourage consumers from embracing it. By no means should the Commission handicap the Standard by creating the incorrect impression that the Standard will be short-lived.

## IV. THE COMMISSION SHOULD NOT ARTIFICIALLY LIMIT ITS APPROVAL OF THE ATSC DTV STANDARD

As an alternative to reviewing or sunsetting the Standard, the *Notice* inquires whether the Commission should consider: (1) authorizing use of the Standard and prohibiting interference with it, but not requiring its use; (2) adopting the Standard for allocation and assignment purposes only; or (3) requiring use of some layers of the Standard, but making others optional.[16] The Commission should not adopt any of these alternatives.

A critical element of today's universal access to free, over-the-air television is the *uniform* use of NTSC signals The NTSC standard allows consumers to purchase television receivers with confidence that -- whether they bring it home, to a football game, to a new home, to college or to the home of a friend or loved one as a gift -- the receiver will operate as expected. This same dynamic allows manufacturers -- and their customers -- to enjoy the benefits of mass production and mass marketing. Manufacturers benefit from lower production costs and consumers benefit from lower prices. This, in turn, promotes universal access to free, over-the-air television by enabling consumers of even limited means to fully enjoy broadcast television programming.

A non-interference-only requirement would be particularly inconsistent with the public interest because it would delay the introduction of DTV and threaten universal access to over-the-air broadcasting. A non-interference-only rule would encourage the introduction of incompatible DTV technologies. Faced with abundant, yet incompatible DTV products, many consumers would be reluctant to abandon their existing television receivers until (and if) a *de*

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[16] *See id.* at ¶ 48.

*facto* standard evolved. Consumers also would be frustrated by the fact that a receiver could only be used in one viewing area but not used (or upgraded to be used) in another part of the country (or, worse, could only be used to receive some of an area's available services). Particularly hard hit would be those least able to afford multiple television receivers. As a consequence, universal access to free, over-the-air broadcasting would be threatened, as would the marketplace transition from analog to digital broadcasting. The cable-consumer electronics compatibility problems which gave rise to Section 17 of the 1992 Cable Act would be dwarfed by the chaos created by multiple DTV standards.

Adoption of a scaled back Standard would lead to a similar result. If, as the *Notice* hypothesizes, only an RF/transmission standard were mandated and compression and coding technologies were made optional, universal access to over-the-air broadcasting and a successful transition to DTV would still be jeopardized.[17] The lack of common coding and compression techniques would likewise create chaos in the marketplace. No television receiver could be marketed as an "all format" or an "all format ready" receiver, because no television manufacturer could ensure that its products would be compatible with all services in all areas (or could be upgraded to be compatible). As a consequence, each consumer's investment in the new technology would be at perpetual risk.

It is for these same reasons that a partial DTV standard is not a satisfactory response to the complaints lodged against the ATSC DTV Standard by some in the computer and movie industries. As the *Notice* points out, several computer manufacturers have argued against inclusion of an interlaced scanning format in the Standard. Similarly, some movie industry

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[17] *See id.*

interests have complained that HDTV is not displayed in a 2:1 format.[18] Contrary to their claims, the concerns of the computer and movie industries were addressed during the open consultative process that led to the adoption of the ATSC DTV Standard, as is evident from the Standard's inherent flexibility. Some in the computer and movie industries, however, remain dissatisfied with the Standard precisely because it is flexible and does not maximize their own parochial interests during the transition to DTV. If the Commission were to pare back the Standard to placate these special interests, universal access to free over-the-air broadcasting service, as well as the successful transition to DTV, would be threatened.

The Commission should not be reluctant to adopt the entire ATSC DTV Standard. As currently formulated, the Standard is flexible enough to support extraordinary experimentation without defeating the legitimate expectations of consumers. In this regard, EIA and the ATV Committee are unaware of any service which the Standard cannot accommodate. Annex C/3 of the Standard describes how new services can be added. The Standard anticipates an abundance of programming using progressive scanning, and it could even accommodate a 2:1 aspect ratio with the future insertion of new packet headers and descriptors. The Commission should therefore not artificially limit its approval of the Standard.

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[18] *See id.* at ¶¶ 49-51.

## V. THE COMMISSION SHOULD ENCOURAGE INDUSTRY TO DEVELOP ANSWERS TO INTEROPERABILITY ISSUES

EIA and the ATV Committee believe that, once the Commission adopts the ATSC DTV Standard, the stage will be set for the prompt roll-out and early adoption of DTV. Adoption of the Standard will give DTV the momentum necessary to persuade broadcasters, manufacturers and consumers to begin investing in this exciting new technology. This momentum, in turn, should facilitate the resolution of many of the technical issues set forth in the *Notice* without the need for Commission intervention.[19]

EIA and the ATV Committee therefore concur in the *Notice*'s assessment that DTV should not be delayed pending the resolution of all of the nettlesome issues associated with the interoperability of over-the-air broadcast and cable television systems.[20] In a prior phase of this proceeding, EIA and the ATV Committee urged the Commission to require the cable industry to: (1) support the ATSC DTV Standard; (2) establish a digital line 21 equivalent; and (3) define more precisely the QAM technology expected to be used by digital cable systems.[21]

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[19] To this end, EIA's Consumer Electronics Manufacturers Association and the Association for Maximum Service Television have initiated a joint project to construct and operate a model DTV station at the facilities of WRC-TV in Washington, D.C. The model station will provide a real-world environment in which to examine interoperability issues, in addition to enabling manufacturers and broadcasters to evaluate a wide range of studio, distribution, transmission and receiver equipment.

[20] *See id.* at ¶ 63. More specifically, the *Notice* cites the concerns of certain cable operators about the cost of accommodating the Standard's B-frames. B-frames, however, are important to the DTV compression technique. They contribute to the quality of the DTV program, minimize consumption of bandwidth, and may only slightly raise the cost of the memory installed in cable converter boxes. Industry solutions to issues such as these are particularly appropriate.

[21] *See, e.g.*, Reply Comments of Electronic Industries Association and Advanced Television Committee, MM Docket No. 87-268, at 29 (Jan. 22, 1996).

Once the ATSC DTV Standard is adopted, and these additional minor steps have been taken, marketplace forces and the voluntary standards-setting process should foster resolution of the remaining issues.

Organizations such as ATSC, EIA, the Society of Cable Television Engineers, the National Cable Television Association ("NCTA") and the Joint Engineering Committee of EIA and NCTA are currently examining the kinds of interoperability issues identified by the *Notice*. These organizations, and the constituents they represent, recognize the benefits of coordinated and interoperable transmission standards. Indeed, to date, the broadcast and cable industries have made significant progress towards resolving interoperability issues. Ultimately, no segment of the program delivery market is willing to forgo the tremendous programming opportunities which the Standard will make possible. These market forces, in conjunction with the channels of communication already established among the various standards-setting bodies, should ensure that DTV programming reaches all consumers.[22]

Of course, DTV cannot be implemented in a vacuum. All delivery media -- whether terrestrial broadcast, cable, satellite or otherwise -- ultimately converge on the consumer. The eventual success of DTV, thus, will depend to a large degree on its interoperability with the other media consumers use. The Commission can be of greatest

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[22] Elsewhere, the Commission has suggested that a formal, omnibus review of digital video compatibility issues might be necessary. *See Implementation of Section 17 of the Cable Television Consumer Protection and Competition Act of 1992*, 9 FCC Rcd 1981, 2005 (1994). EIA and the ATV Committee suggest that, at this point in the development of DTV, the Commission might simply wish to ask industry to prepare a study of remaining interoperability issues, and the prospects and costs of resolving them.

assistance in promoting DTV by confirming that the ATSC DTV Standard is *the* standard on which the resolution of these interoperability issues should be predicated.

## VI. THE COMMISSION SHOULD NOT ADOPT TELEVISION RECEIVER STANDARDS

EIA and the ATV Committee previously have explained why marketplace forces will ensure that DTV-compatible receivers and converters are widely available once the ATSC DTV Standard is adopted. EIA and the ATV Committee have also pointed out that the Commission lacks the statutory authority to prescribe the manner in which television receivers format and/or otherwise display the frequencies they receive.[23] EIA and the ATV Committee incorporate those comments herein by reference. Suffice it to say that the All-Channel Receiver Act grants the Commission only limited authority to require television receivers to "adequately receiv[e] all *frequencies* allocated by the Commission to television broadcasting."[24]

The *Notice* asks whether adoption of the Standard would change any of the parties' previously expressed positions. Citing the purported recommendation of the ACATS Technical Subgroup that all televisions should be required "to receive adequately all DTV formats," the *Notice* solicits comment on "the importance of this requirement for compatibility between receivers and broadcast signals."[25] It should be noted that nowhere in its final report

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[23] *See* Comments of Electronic Industries Association and Advanced Television Committee, MM Docket No. 87-268, at 13-18 (Nov. 20, 1995); Reply Comments of Electronic Industries Association and Advanced Television Committee, MM Docket No. 87-268, at 9-17 (Jan. 22, 1996).

[24] 47 U.S.C. § 303(s) (emphasis added).

[25] *Notice* at ¶ 66.

did the ACATS Technical Subgroup advocate an all-format requirement. Even if the Subgroup had made such a recommendation, the Commission does not have the authority to require manufacturers to produce all-format receivers.

Moreover, as EIA and the ATV Committee have previously explained, there is no need for such a requirement insofar as digital televisions are concerned. Simply stated, it would make no economic sense for manufacturers to produce digital televisions that did not work (*i.e.*, that went blank) whenever a particular DTV format is broadcast. Because the marketplace will ensure a robust market for digital receivers and digital converters capable of receiving all DTV formats, there is no need for further government intervention or regulation of television receivers.[26]

Although the Commission should proceed with confidence that the marketplace will produce an abundance of digital televisions capable of receiving all formats, this does not mean that consumers will abandon niche products. As EIA and the ATV Committee explained in an earlier phase of this proceeding, there will continue to be consumer demand for NTSC-only receivers (for use with such things as analog video games and VCRs) well after the transition to DTV begins. Similarly, some consumers will be satisfied with standard definition-only digital receivers, while others will insist upon high definition receivers. Consumer electronics manufacturers will continue to satisfy this diverse consumer demand, and, so long as the ATSC DTV Standard is adopted, they will be able to do so while assuring that DTV receivers function on all frequencies in all locations.

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[26] This is not to say that all digital television receivers will display HDTV signals in an HDTV format, only that all digital televisions will be capable of receiving all digital formats.

If the consumer electronics industry's past experience with new technologies is any indication, consumers will demand, and manufacturers will produce, a variety of DTV products, ranging from the most robust and expensive to inexpensive limited-function devices. This is entirely appropriate in a competitive market. Consumers should be free to choose the combination of features and formats that best meet their needs. In this regard, one of the principal advantages of the Standard is that it decouples the transmission format from the display format. The Commission's rules should not recouple them. Consumer choice, not government regulation, should dictate the mix of equipment features and functions available to the public.

## VII. CONCLUSION

For all of the reasons set forth above and in our prior filings in this proceeding, EIA and the ATV Committee urge the Commission to adopt the minimum regulations necessary to promote the rapid development of DTV while preserving universal access to free, over-the-air

broadcast television. As the record of this proceeding will make clear, the Commission can accomplish this goal by incorporating the entirety of ATSC Digital Television Standard into its rules.

Respectfully submitted,

ELECTRONIC INDUSTRIES ASSOCIATION
ADVANCED TELEVISION COMMITTEE

By: Peter F. McCloskey
Peter F. McCloskey
President
Electronic Industries Association

By: F. Jack Pluckhahn
F. Jack Pluckhahn
Chairman
Advanced Television Committee

2500 Wilson Boulevard
Arlington, Virginia 22201
(703) 907-7600

Of Counsel:

Joseph P. Markoski
Marc Berejka
Squire, Sanders & Dempsey
1201 Pennsylvania Avenue, N.W.
Post Office Box 407
Washington, D.C. 20044
(202) 626-6600

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